because he's 77 years old, would not be treated the way it's treated in the United States. In other words, they say, well, he doesn't have long to live, even if he'd live another four or five years. They'd say, well, we've got to spend the money on people that have more, can contribute more to the economy."

That earned a rebuttal from Ara Darzi, Britain's ambassador for health and life sciences. "Well, I'm sorry to say that's the most ludicrous thing I've heard," he told National Public Radio (where I work). He went on to say it's not just false — "these are lies which have been used to set fear against reform." He added that life expectancy in the UK is longer than it is in the US.

As the flap unfolded, the National Health Service found friends and supporters on both sides of the Atlantic.

"For the first couple of years I lived in Britain, I was an illegal immigrant from the United States, visaless with an expired passport and looking over my shoulder all the time," wrote Clancy Sigal in the Los Angeles Times. "Even so, from the very first day I arrived at Victoria Station in London, suffering from bronchitis, I was accepted in the NHS — the national health scheme, we called it — no questions asked and no ID required." For three decades, he used the free medical system, "and that single-payer, socialistic, government-run, bureaucratized, heavily used, nationalized health system served me — and 50 million others — very well."

More visible – and vociferous — was the defence from the UK, from the likes of Prime Minister Gordon Brown and Conservative Party leader David Cameron. The latter sent out a widely quoted email proclaiming national pride in the NHS.

"One of the wonderful things about living in this country is that the moment you're injured or fall ill — no matter who you are, where you are from, or how much money you've got — you know that the NHS will look after you."

Of course, many misrepresentations are built on a grain of truth. And in this case, the truth is that health care is not a limitless resource — to make it affordable, the NHS does set limits about what it will cover. That doesn't mean snuffing out the Ted Kennedys and Stephen Hawkings of the world, but it does mean reining in expenses.

So, when the British medical review institution — National Institute for Health and Clinical Excellence — concluded that controlled studies of cortisone for non-specific lower back pain showed that the shots don't seem to work, it decided to recommend against them in that context. In the UK as well as the US, this was an outrage.

"Specialists fear tens of thousands of people, mainly the elderly and frail, will be left to suffer excruciating levels of pain or pay as much as £500 each for private treatment," the Telegraph warned.

Sean Hannity on Fox News waved around that article as proof that America is heading toward a world of medical rationing and agony that would no doubt result from putting a price tag on human life and suffering.

The truth is, we already do, wrote Peter Singer in the New York Times magazine.

"Health care is a scarce resource, and all scarce resources are rationed in one way or another." The real question — not currently up for debate — is whether to be honest and direct about what's already happening.

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Key data base

Britain's health service may be under attack in the US but it is providing researchers with the base for a major health project. **Nigel Williams** reports.

While the NHS is under attack from US critics of potential health reforms, it underpins one of the largest projects hoping to exploit burgeoning genetic information.

The UK Biobank project aims to store biological samples from 500,000 people aged between 40 and 69, along with other details of their health and lifestyle, to map any developing illnesses and their link with genes amongst the group.

The facility to store all these samples was opened this summer with 350,000 people recruited and the target hoped to be reached next year. At the heart of the project is a hi-tech blood and urine store, the largest facility of its kind in the world which will keep 10 million samples at –80°C for the next 30 years or more. The project has incorporated specialist knowledge worldwide to ensure the samples are stored effectively for long periods.

"To talk about the sheer size detracts from the other, very real, achievements that have allowed us to develop a state-of-the-art facility that means we can store large quantities of blood and urine samples in the best conditions possible over decades, and retrieve them quickly and easily when the time comes," says Tim Peakman, UK Biobank executive director.

Each sample of blood is stored in a number of aliquots and identified by a unique bar code so that the individual donor remains anonymous. A frozen, frost-free storage environment is crucial if the bar codes are to be read and successfully retrieved in years to come.

"Frosting is one of our biggest concerns," says Peakman. The solution is to ensure that the air circulating within the freezer is as dry as possible — as low as two parts per million of water vapour (compared with 10,000–12,000 in the air on a relatively humid summer's day) — so that frost cannot form and disable the robotics and make the bar codes on the tubes illegible. Water vapour is removed from compressed air dryers at the back of the store before feeding it into the system.

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The official opening of the facility was accompanied by an award of an additional £6 million by the Wellcome Trust, Medical Research Council and Department of Health to the £60 million project, which is aimed to allow researchers to gather more information from participants including diet, fitness and physical activity levels. Biobank also plans to record information on participants' eyes as eye health may be linked to many other disorders.

Sally Davies, director general of research and development at the Department of Health said: "An important part of the Department of Health's work is to stand behind research aimed at tackling health problems and improving NHS care. Because of its potential for future generations, the government is glad to join with the Wellcome Trust, the Medical Research Council and others in supporting UK Biobank. UK Biobank will help us understand how our children and our children's children can live longer, healthier lives."

UK Biobank writes to people to ask if they are willing to take part in the project. With their approval, it will track their health over the next 30 years but it is essentially an altruistic project.

The volunteers are invited to one of 20 local assessment centres, where they complete an automated questionnaire and are interviewed about lifestyle, medical history and nutritional habits. Basic variables such as weight, height, blood pressure, bone density, grip strength and lung function are measured and blood and urine samples are taken.

But there is not feedback to the volunteers. This is to ensure that participants are not compromised if they seek life assurance, says Biobank chief executive, Rory Collins.

Not surprisingly, some people are unhappy with the invitation that arrives in the mail. And some commentators worry that any access to the genetic data by the private sector might lead to profit being put before altruism. In July, the House of Lords science and technology committee issued a report calling for the NHS to do more to translate the advances in gene science into clinical practice but also for tighter regulation of "direct to consumer" genetic testing.

But the Department of Health, while acknowledging that harnessing genetic information offers great potential to develop new treatments, strict regulations are in place to ensure information is not used incorrectly.

And other countries, also with access to patient data, have also been seeking to gather population-based information. The Wellcome Trust announced new funding last month of £2.5 million for the Chinese Kadoorie Biobank Study, originally established in 2004 as a collaborative project between the University of Oxford's clinical trial service unit, and the Chinese Centre for Disease Control and Prevention. The Kadoorie Biobank study has already recruited more than 500,000 people aged between 35 and 74 from both rural and urban areas throughout China.

Like the UK project, the aim is to study environmental and genetic factors involved in common conditions. The Biobank is integrated with China's national systems of healthcare and disease surveillance. Zhengming Chen at the University of Oxford, who leads the UK arm of the project, said that China was uniquely placed for large-scale medical research: "There is a great deal of unexplained variation in disease rate and risk exposure and a high incidence for many common conditions such as stroke."

On track: The UK Biobank stores millions of blood and urine samples from participants at a site near Manchester. (Photo: Wellcome Library, London.)